DATE: February 2, 2004

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In order to be a defensible document, I believe the Bulletin 160 Water Plan must be clarified and made more adequate in several basic respects. Please consider my attached comments.

Feb. 2, 2004

Basic Clarifications Proposed by Alex Hildebrand for the Bulletin 160 Water Plan In Order for it to be a Credible Plan

Introduction

In order for the State Water Plan to be credible and useful it must comply with the basic provisions of laws regarding its content and purpose; it must credibly and clearly derive all of the estimates and conclusions that relate to that compliance; it must reference in its summary chapter the location in the Plan document where each estimate or conclusion is credibly and clearly derived; and its estimates must be provided as ranges where there is substantial uncertainty that would be obscured by a single number and where a single number could also reflect a biased opinion. Furthermore, the basic purpose of the Water Plan is to assure that an adequate developed water supply for the future population can be provided if the proposed measures are implemented. This purpose must not be obscured by worthy discussion of interrelations among water uses and regional plans, and discussion of the benefits of managing water for purposes that don't affect the adequacy of the developed water supply. As now drafted the Water Plan does not clearly comply with these requirements.

Mandated Scope and Purpose

Basic legal requirements of scope and purpose include the following:

First, the Plan must estimate the developed water supply required to meet the public's future needs during the chosen planning period of year 2030. These needs include direct human use of water; water to produce domestically enough food so that the public does not become dependent on a net importation of food; water to provide the level of environmental protection that has been adopted by law; water to replace current reliance on the unsustainable net long-term overdraft of groundwater; and water to provide an adequate level of water-related recreation and other amenities. In making these estimates credit can be taken for credible anticipated reductions in the water required to meet a given need. The Plan must distinguish between consumptive uses of water and non-consumptive uses of water that is then recovered and reused.

Second, the Plan must then propose measures that would collectively be adequate to provide the developed water supply that is estimated to be needed statewide. It is not sufficient to provide a list of potential measures without demonstrating that the potential net yield of a plausible mix of measures would provide an adequate increase in developed water supply to meet the estimated required 2030 supply. Measures that reallocate water supply among uses must be properly accounted in determining the future water supply needed for each class of uses. For example, if ag water is reallocated in the short-term for urban use it diminishes the other measures needed for urban water supply, but it also increases the measures that will later be needed to provide an adequate 2030 ag supply.

Reallocation of ag water to urban and environmental uses results from water transfers, water taken by urban sprawl which preempts both farmland and the farm water that was appurtenant to that land, water taken by converting farm land to wetlands (which often consume more water than was used by farming), water taken by shifting summer stream flow used by ag to spring flow for fish, etc.

Water for Production of Farm Products

There is no credible basis for the current assertion that the public's need for ag products in 2030 can be provided with no more ag water than was available in 2000. The ag community believes that this is not scientifically feasible, and is in strong disagreement with the AIC report. Furthermore, the Water Plan even permits a decline in ag water supply from the 2000 base.

In the case of water needed in 2030 to produce the public's need for essential ag products, the estimate should therefore be given at this time as lying within a broad range. The lower end of the range can be based on the AIC report (with no benefit claimed from climatic change), and the upper end of the range should be based on increasing in proportion to population both the need for ag products and the ag water needed to produce those products.

Implementation and Investment Guide

This Guide as now proposed will be very confusing and misleading to readers who are not fully familiar with what it does and does not mean. The numbers under the water supply benefit column should not be a mixture of measures which increase the statewide developed water supply or diminish the need for that supply, and water that is transferred from one use or region to another and does not benefit the statewide developed water supply. The Guide does not address the substantial reallocations of ag water to other uses by means other than transfers as discussed above. The Guide indicates erroneously that these reallocations will reduce groundwater overdraft.

The Guide and its explanatory text does not point out that most of the water supply benefit claimed from recycling muni water is water that is not consumed and which is already recovered and reused. The Guide does not explain that conjunctive management and groundwater storage only adds to the developed water supply to the extent that the stored water is water that would otherwise be lost to beneficial use, such as by flowing to the ocean or Bay. It does not point out that the yield figures given for surface storage are based on only five projects which would only produce the indicated yield if built and operated for that purpose whereas those projects are proposed primarily for environmental benefits, etc.

There is no disagreement that so called "soft path" measures should be preferentially pursued to the extent that they are adequate and competitively cost effective and reliable. However, it is unlikely that the items now in the Guide will provide enough water. To the extent that they are collectively inadequate we must turn to

a measure that is not in the Guide. That measure is to capture and store water that now flows to the Bay in excess of Delta outflow requirements. There is a large amount of this water. It can be captured by the coordinated operation of existing and new on-stream storage, offstream storage, and subsurface storage. On-stream storage can typically be more effective than other types of storage in capturing excess flows during the period of excess. It can then be transferred promptly to offstream and/or subsurface storage to recover space in the on-stream storage facilities.

Conclusion

I do not believe that the Water Plan will be understandable and credible, and that it can resist legal and political challenge, if it does not address the concerns expressed herein.